STUDY OF PATTERN OF ANAEMIAS IN ADULT POPULATION ATTENDING TERTIARY CARE HOSPITAL

ABSTRACT

INTRODUCTION:

Anemia is defined as reduced red cell mass below normal limits along with reduction in the oxygen carrying capacity resulting in tissue hypoxia. Over 2 billion people are diagnosed as anemia according to the WHO.[(2)]In the developing countries Iron deficiency anemia is the most common nutritional disorder seen usually in young children & women of reproductive age group. Anemia in elderly people is the most common problem associated with increased morbidity and mortality.

AIM : To evaluate the hematological parameter, clinical correlation, prevalence, type and severity of anemia in adult population attending tertiary care hospital.

OBJECTIVES To study the morphology of RBC'S in adult patients with anemia To correlate red cells morphology with clinical and hematological parameters in the selected cases under study To determine the incidence, severity and types of anemia's in adult population

MATERIALS AND METHODS : The study was conducted at Chennai medical college hospital & research centre, Irungalur, Trichy from September 2015 to September 2017. This was a prospective study and sample size studied was 100 cases. All the adult patients with anemia were diagnosed by cell counter during routine complete blood count. The anemic blood samples are collected by cell counter and subjected to peripheral smear examination and studied under light microscopy for morphological evaluation of anemia. INCLUSION CRITERIA:_Adult population – 19 to 84 yrs, Both male & female of adult population were included in this study

RESULTS : In our study, out of 100 anemia cases, around 20% of cases in all age group (i.e. 21 to 70) except only 4 cases in < 20 age group, Out of 100 cases females are more common ie. 68% and males are only 32%, Mean Hb level is 6.9 in males and 6.8 in females, 67% of cases are in PCV value 20 – 30 group, RBC level is more than 3 Millions / cumm in 56% of the total population, 58% of cases MCV value is below 75, 37% of cases in 75-100 mcv value (microcytic pattern), 10% of cases are in <15 MCH value, 55% of cases are in 15-25 MCH value, 29%of cases are in 26-35 group only 6% of cases in above 35 group. (hypochromic pattern), Majority of the cases (71%) are in MCHC < 32 group (hypochromic pattern), 55% of cases platelet value is < 3 and 45% of cases platelet value is >3, 52% of cases TC value is more than 7000 and 48% of cases TC value is < 7000, Majority of the cases (71%) are in 51-75 age group, peripheral smear study shows hypochromic microcytic pattern, 30% are dimorphic and normocytic pattern.46% of cases lymphocyte value is < 25, 51% of cases in 25-50 group and only 3% of cases lymphocyte value is more than 50.83% of cases, eosinophils value is < 5 and only 17% of cases are in >5 eosinophils group.75% of cases are in <4 monocytes value and remaining 25% of cases are in >4 monocyte value.Majority of the cases (91%) basophil value is 0 and remaining 9% of basophil value is 1.47% of cases Retic value are < 1, 24% of cases retic value is 1-2 and remaining 29% of cases retic value is more than 2.

CONCLUSION : In our study, out of 100 cases of anemia in adult population majority of females with ME ratio 1 : 2 with mean Hb level for females is 6.8gm and mean Hb level of male is 7.2. More than 67% of anemia is reported in second and third decades.On

analyzing RBC indices and peripheral smear, morphological study more than 58% of cases are in nutritional anemia predominantly microcytic hypochromic pattern (Iron deficiency anemia)37% of the cases are dimorphic pattern includes chronic kidney disease and chronic liver diseases. 3% of cases are macrocytic picture includes leukemia and megaloblastic anemia In our analytical study majority of adult population affected are the females of second and third decades. Most of them are nutritional deficiency constitutes 60% and 30% constitutes CKD, liver disease malaria and other infections. Less than 2% constitutes neoplastic etiology Less than 10% constitutes refractive anemias.

Key words : Microcytic hypochromc anemia, megaloblastic anemia, hypochromic